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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/842,225      | 04/26/2001  | Michel Laberge       | 201                 | 7426             |

720 7590 05/23/2003

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EXAMINER

KIANNI, KAVEH C

ART UNIT PAPER NUMBER

2877

DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

04/26/2001

# Office Action Summary

Applicati n No.

09/842,225

Applicant(s)

LABERGE ET AL.

Examiner

Kevin C Kianni

Art Unit

2877

-- The MAILING DATE of this c mmunication appears on the cover sheet with the corresp ndenc address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 37-39 and 43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-39 and 43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

### DETAILED ACTION

Applicant's Group election without traverse of claims 37-39 and 43 in paper No. 11 is acknowledged.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 37-39 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens (US 4333009).

Regarding claim 37-38, Stevens teaches a method for directing any one of a plurality of input optical signals to any one of a plurality of output signal channels in an optical switch (shown in at least fig. 1; see abstract), the method comprising detecting a Moire interference pattern and determining therefrom a position of at least one element in said switch (see col. 1, lines 40-46 and col. 2, lines 30-38), said element capable of at least one of: directing said one output signal channel so as to receive said one input optical signal and directing said one input optical signal so as to be received by said one output signal channel (see col. 3, lines 49-67); a receiving end of said one output signal channel and a transmitting end of an input signal channel associated with said one input optical signal (see col. 3, lines 49-67).

However, Stevens does not explicitly state that the above switch is a cross-connect switch. Nevertheless, Stevens' switch system shown in fig. 3 and 6, comprises

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optical conductors/fibers that transmit/receive light in switching fashion through openings/reflectors/mirrors in which it is well known to those of ordinary skill in the art that light crossing through a set of input/output fibers known as cross-connect switch, such cross-connection of optical signals provides a mechanism for determining the absolute position and /or the change of position of many different kinds of movable elements (col. 1, lines 24-30).

Regarding claim 39, Stevens teaches a method of establishing optical communication in an optical switch between a first optical fiber and a second optical fiber selected from a plurality of optical fibers (shown in fig. 1-2), said method comprising detecting a Moire interference pattern (see col. 1, lines 40-46 and col. 2, lines 30-38) and determining therefrom a position of at least one of: (a) an end of said first optical fiber, (b) an end of said second optical fiber; (c) an optical element operative to influence an optical path between said first and second optical fibers; and (d) a plurality of optical elements operative to influence an optical path between said first and second optical fibers (see fig. 1-4, items moving element/s 53a-d and 55 and end fibers 41 and 57; also col. 3, lines 41-63 and col. 4, line 46-col. 5, line 19). Regarding Stevens' teaching of cross-connect the arguments presented in rejection of claim 37 is analogous in rejection of claim 39.

Regarding claim 43, Stevens teaches an optical fiber switch comprising first and second groups of optical fiber switching units, disposed in optically opposing relation (shown in figures 1-3 including opposing fibers 41 and 57), each of the switching units in one! of said first and second groups further comprising:

(a) an optical fiber operative to conduct optical signals (see fi. 2, item 35); and (b) a position encoder operative to detect a Moire interference pattern and determine therefrom a position see col. 1, lines 40-46 and col. 2, lines 30-38) of at least one of: (i) an end of said optical fiber; (ii) an optical element operative to influence an optical path of optical signals associated with said fiber; and (iii) a plurality of optical elements operative to influence an optical path of optical signals associated with said signal emitted from or coupled into the fiber (see fig. 1-4, items moving element/s 53a-d and 55 and end fibers 41 and 57; also col. 3, lines 41-63 and col. 4, line 46-col. 5, line 19). Regarding Stevens' teaching of cross-connect the arguments presented in rejection of claim 37 is analogous in rejection of claim 43.

***Citation of Relevant Prior Art***

3. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Johnson 6498685 teaches at least claim 37-38

Laor 6101299 teaches claims 37-38 and 43

Rejiman 4265534

Harshberger Jr. et al. 4775788

Margolin 4762391

Waszkiewicz 4841142

Gilby 4596925

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Hayatt 4120583

Bergkvist 4172994

Fitts 5175601

These references are cited herein to show the relevance of the apparatus/methods taught within this reference as prior art.

**Contact Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaveh Cyrus Kianni whose telephone number is (703) 308-1216.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (703) 308-4881.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 308-7722, (for formal communications intended for entry)

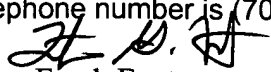
**or:**

(703) 308-7721, (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South  
Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.

Kevin Cyrus Kianni  
Patent Examiner  
Group Art Unit 2877

  
Frank Font  
Supervisory Patent Examiner  
Group Art Unit 2877

May 14, 2003